

Coal Mine	Coal Specifications	Company	Facilities	Formation	Cross Section	Cross Section Index Map	Stratigraphy	Location	Production	Reclamation	Status	Type	Photographs	
Black Butte Mine	Subbituminous C, 9.400-10.000 Btu/lb, 0.3-0.7 percent sulfur (UUnion Pacific, 2010a)	Black Butte Coal Company (UUnion Pacific, 2010a)	Coal plant, laboratory, water treatment plant, warehouse, shop, changehouse and office (Kiewit, 2010)	Coal is produced from the Wasatch, Fort Union, Lance and Almond Formations. In the lower part of the Fort Union Formation, the A, B, and C coal beds or the A-C coal zone in the Black Butte Mine is laterally equivalent to the Deadman coal zone in the Jim Bridger Mine (Maywood, 1987).	from Flores and others, 1999c	from Flores and others, 1999c	modified from Hettiger and Kirschbaum, 1991, in Flores and Bader, 1999	Point of Rocks, Wyoming (UUnion Pacific, 2010a)	Year 2009 3.8 2008 3.6 2007 3.6 2006 3.4 2005 3.7	At all presently active surface mines, as mining progresses, overburden is placed in a previous cut, where it is graded to the natural topography and covered with topsoil. Regraded land is fertilized, mulched and seeded with native grasses and bushes for livestock grazing and wildlife habitat (Kiewit, 2010).	Began shipping coal in 1979, and is still active (UUnion Pacific, 2010a).	Black Butte Coal Company operates one of the largest surface coal mines in the nation (Kiewit, 2010).		
Elk Mountain Mine	10.930 Btu/lb, 0.7 lbs. SO ₂ /mmBtu (UArch Coal, 2010)	Arch Coal	Active surface mine. Proposed mine-mouth Coal-to-Liquids facility.	Paleocene Hanna Formation	from Flores and others, 1999b	from Flores and others, 1999b	from Flores and others, 1999a	Carbon County, Wyoming	Year 2009 7 2008 261 2007 120 2006 28	See above. Reclamation coincides with mining.	Life surface mine currently reducing inventory. Arch Coal will continue the surface mine and expand to include an underground operation when coal markets, such as a coal-to-liquid plant, materialize (Arch Coal, 2012, written communication). Arch Coal has acquired an additional 200 million-ton reserve block that will be available for future mining operations (UUnion Pacific, 2010d).	the surface mine with plans to shift operations to underground (UArch Coal, 2010).	Elk Mountain Mine (from World Imagery GIS service, ESRI, 2010).	
Jim Bridger Mine	Coal rank is mainly subbituminous B to C (Glass, 1976).	Bridger Coal is a joint business venture. Pacific Minerals, Inc. has two-thirds ownership, and Idaho Energy Resources, Co. has the other third (UGearino-Star-Tribune, 2010).	The mine provides the adjacent Jim Bridger Power Plant with a continuing fuel source. The four-unit, 2,100-megawatt generating station produces electricity for PacifiCorp and Idaho Power, customers in six Western states. (UGearino-Star-Tribune, 2010).	There are five coal seams within the Deadman coal zone of the Jim Bridger coal field, designated, from top to bottom, D5 through D1 (Venter and Beam, 1999). The Deadman coal zone is in the lower part of the Fort Union Formation.	from Flores and others, 1999c	from Flores and others, 1999c	modified from Hettiger and Kirschbaum, 1991, in Flores and Bader, 1999	East north of Interstate 80, about 35 miles northeast of Rock Springs. (UGearino-Star-Tribune, 2010).	Year 2009 5.6 2008 8 2007 8 2006 7.6	See above. Research projects have been initiated in the past to assess establishment of a predominantly native, diverse seed mix under irrigation, as well as to determine irrigation rates and duration (Parady, 1985).	In 2007, the mining operation was expanded to include a new underground coal mine that mines a deeper coal seam. The additional coal will be used to fuel the power plant for another 20 years. The estimated cost for transitioning to the underground mine was approximately \$150 million (UGearino-Star-Tribune, 2010).	The mine employs three methods of mining - traditional surface, where the coal is less than 300 feet deep; highwall mining, which is the unconsolidated face of exposed coal from the surface mine; and underground mining. (UGearino-Star-Tribune, 2010).	Highwall miner at Jim Bridger Coal Mine (used with permission from OAdkar, 2010).	Jim Bridger Power Plant (used with permission from Jeff Hyman, 2012, UPacificCorp).
Kemmerer Mine	9.500-10.000 Btu/lb, 0.6-1.0 percent sulfur (UUnion Pacific, 2010b); subbituminous B (Yun and others, 1987).	Chevron Mining	Naughton Power Plant is located near Kemmerer, Wyo.	Coal is produced from multiple coal seams in the Advavite Formation that dip from 17 to 25 degrees. (UUnion Pacific, 2010b).	modified from Lawrence, 1992, in Knight and others, 2000		(from Glass and Jones, 1991)	Lincoln County, Wyoming	Year 2009 4.4 2008 4.9 2007 5.2 2006 4.5	See above. Allowing total out-of-pit spoil and minimum in-pit reclamation while mining steeply dipping bituminous coal, the 1-UD area is permitted as a special bituminous operation (Whitman, 1992).	The Big Pit was begun in 1971 and is presently idle. In January 2011, Chevron Corporation announced their intent to sell their remaining coal mining operations, including the Kemmerer Mine (UWhitman, 2011). Chevron Mining spokesmen said new coal technologies are too far off to make staying in coal a good strategy (UMarketWatch, 2011).	Surface mine.	Aerial photograph of the Kemmerer Mine (UWhitman, 1992).	Naughton power plant near Kemmerer (photo taken July 14, 2011).
Medicine Bow Mine	10.400 Btu/lb, 0.6 percent sulfur (UUnion Pacific, 2010c); high volatile C bituminous	Arch Coal	When the Medicine Bow Mine was active, a McNally-Pittsburg coal preparation plant crushed and sized coal at a rate of 1,400 tons per hour. Sampling at the mine was accomplished via a two-stage automatic sampling system (UUnion Pacific, 2010c).	Medicine Bow Formation (Upper Cretaceous and Paleocene)	from Flores and others, 1999b	from Flores and others, 1999b	from Flores and others, 1999a	Carbon County, Wyoming, six miles west of Hanna, Wyoming, on U.S. Highway 30.	Year 2004 148 2003 189 2001 455 2000 406	Fully reclaimed.	Inactive surface mine, reclaimed.	Surface.	Normal faults showing displacement of Ferris coal beds in the highwall of the Medicine Bow Coal Mines (from Flores and others, 1999a).	
Rosebud Mining and Reclamation	Subbituminous A	Kiewit Mining Group		Hanna Formation	from Flores and others, 1999b	from Flores and others, 1999b	(see Medicine Bow Mine)	Hanna, Wyoming; eastern flank of Hanna syncline.	Year 1992 2 1991 11 1990 176 1989 72	Reclaimed. What began as a voluntary reclamation program in 1965, evolved into the complete reclamation of 4,000 acres. The land is now restored to a quality equivalent to or greater than its pre-mined condition. Rosebud was the first Wyoming mine to receive a voluntary bond release. As the reclamation efforts evolved, many innovative techniques, such as slot dozing, were developed (Kiewit, 2010).	Reclaimed; production from 1961 to 1992. 11 pits made up the Rosebud Coal Sales Company (Kiewit, 2010).	Surface mine operation (UUnion Pacific, 2010).	The reclaimed land of the former Rosebud Coal Mine (Kiewit, 2010).	Former Rosebud Coal Mine operations (Kiewit, 2010).
Seminole II Mine	11,000 Btu/lb, 0.65 percent sulfur (UUnion Pacific, 2010d); subbituminous A and B.	Arch Coal	When the mine was active, sampling at Seminole II was performed with a belt scale. Weight determination was made by the meter method, with accuracy tested using a chain test every six months. Inspection and calibration were performed by an independent consulting firm (UUnion Pacific, 2010d).	Hanna Formation	from Flores and others, 1999b	from Flores and others, 1999b	(see Medicine Bow Mine)	Carbon County, Wyoming	Year 2004 57 2003 136 2002 258 2001 298	Fully reclaimed. After mining activities ceased in an area, Arch Coal planted native grasses, and shrubs that created new habitat for big game and small animals (UArch Coal, Inc., 2007).	Reclaimed; began operation in 1973 (UUnion Pacific, 2010a).	Surface (UUnion Pacific, 2010a).	Coal and carbonaceous shale in an abandoned mine, north of the town of Hanna, (from Flores and others, 1999b).	
Shoshone Mine	10.840 Btu/lb, 0.63 percent sulfur (UUnion Pacific, 2010e); subbituminous A.	RAG American Coal (UUnion Pacific, 2010e)	Rail facilities were tied to the Shoshone Mine (Hutchinson, 2001), but have been removed since the mine is inactive.	From the Hanna No. 80 seam, which averages 17 feet in thickness, the Shoshone Mine had produced consistent, high-quality, low-sulfur coal. (UUnion Pacific, 2010e).			(see Medicine Bow Mine)	4 miles north of Hanna, Wyoming, in Carbon County	Year 2000 1.2 1999 1.7 1998 1.9 1997 2.8	Reclaimable reserves are estimated to be approximately 8.5 million short tons (UUnion Pacific, 2010e).	Fully reclaimed. A contested case hearing concluded that the reclamation bond covered the obligation to reclaim the rail facilities (Hutchinson, 2001).	The Shoshone Mine is no longer active, and is fully reclaimed.	Underground longwall (UUnion Pacific, 2010a).	
Stansbury Mine (Proposed); Aka, Little Patriot	14 percent moisture, 5.2 percent ash, 95 percent sulfur, 10.926 BTU/pound (OAI Perry Enterprises, 2006); subbituminous A to high volatile C bituminous.	New Stansbury Coal Company	The mine is located on the main line of Union Pacific Railroad for eastern and western deliveries (OAI Perry Enterprises, 2006). This mine is currently closed. Several years ago a group proposed reopening this mine and renaming it, The Little Patriot Mine.	Cretaceous, Mesaverde Group, Rock Springs Formation, No. 8 coal seam			(see Medicine Bow Mine)	7 miles north of Rock Springs, Wyoming.	Year 1993 205 1992 453 1991 261 1990 189	Underground mine.	Reclaimed. About 4 years ago, there was discussion of reopening and renaming this mine The Little Patriot in memory of 9/11/2001.	Underground. Mine plans call for use of continuous miners in room and pillar retreat mining from 260-3 coal seams for the first 5 years. Life of mine is projected at 20 years (OAI Perry Enterprises, 2006).		

Coal Mines in Southwestern Wyoming
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